NRSC-2 MEASUREMENT

Occupied Bandwidth, and Harmonics

For

Radio Station

WLIP-AM

Conducted on

December 19, 2020

Measurements Performed by

Radio Aids

Precision Frequency Measurements

P.O. Box 1121

Mishawaka, IN 46546

574-229-6280

FOREWORD

This report contains the results of measurements as described in Section 73.1590 of the rules and regulations of the Federal Communications Commission that were conducted on December 19, 2020 on behalf of Radio Station WLIP-AM, Kenosha, WI. WLIP-AM operates on 1050 Khz with a power of 250 watts daytime, and night-time.

These measurements show the extent to which WLIP complies with the occupied bandwidth and harmonic emission requirements of the Commission's rules, specifically Sections 73.44 regarding AM Transmission Emission Limitations.

METHODS AND EQUIPMENT USED

The occupied bandwidth portions of the measurements were conducted using an Anritsu Model MS2721B. The antenna used is a Loop antenna with 15 feet of RG-214 coaxial cable.

For this report the analyzer was operated in the peak hold mode for numerous sweeps totaling a minimum of 10 minutes for each measurement. Specifics on the measurement are located on each page.

For identification and measurements of harmonics a Potomac model FIM-41 was employed.

Measurements were made during daytime hours that occurred after sunrise and concluded prior to two hours before sunset to minimize skywave interference.

Please note that any adjacent peaks or spurs were other radio Stations and not caused by WLIP-AM.

LOCATION OF MEASUREMENTS

The measurements were made at a location within one kilometer from the WLIP transmitter site. The attached map shows the location relative to the transmitter site.

RESULTS

The results of the occupied bandwidth portion of the measurements are the spectrographs shown in Figures A and B. All spectrographs were made with the station operating under normal conditions and with programming containing primarily music.

QUALIFICATIONS OF ENGINEER

Robert Henning, located in Mishawaka, Indiana, hereby states that he has been actively involved in Broadcast Engineering since 1990; His qualifications as a technical consultant are a matter of record with the FCC. He holds an FCC General Radiotelephone License, and Certification from the Society of Broadcast Engineers. He also certifies that he has prepared this report for Radio Station WLIP; that he made the equipment performance measurements of Radio Station WLIP; and that all the data contained in this report is accurate and correct to the best of his knowledge and ability.

TABLE A

Spurious and harmonic emissions observed between

530 KHZ and 5000 KHz for operation of **WLIP-AM**

Frequency	Relationship	Signal Relative To Carrier	Minimum Attenuation required by 73.44
1050 kHz	Carrier (825 V/m)	0.0 dBc	-----
2100 KHz	2nd Harmonic	-82.76 dBc	80 dBc
3150 Khz	3rd Harmonic	-97.50 dBc	80 dBc
4200 Khz	4th Harmonic	-108.78 dBc	80 dBc

A 5th harmonic reading was not available due to limitation of the FIM-41

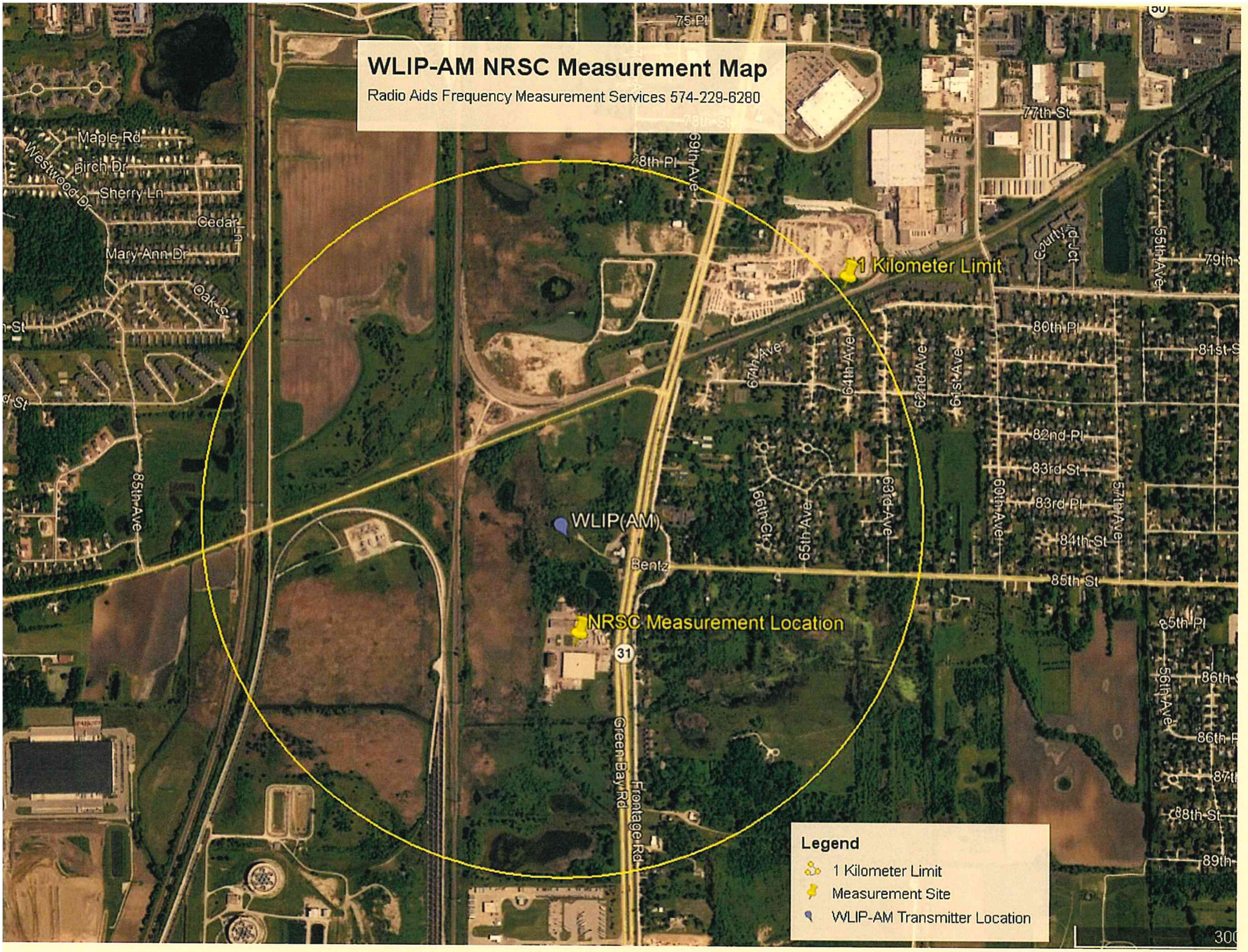
Frequency Measurement at the time of Study:

1,049,998.948

The MAIN Transmitter of radio station WLIP-AM was found to be operating within N.R.S.C and compliance with Section 73.44

A copy of this report should be made part of the station's on-line Public File, and designated Chief Operator should place the original with station Operating Logs. In addition, a PDF copy of this report is available for email as well. Please contact us.

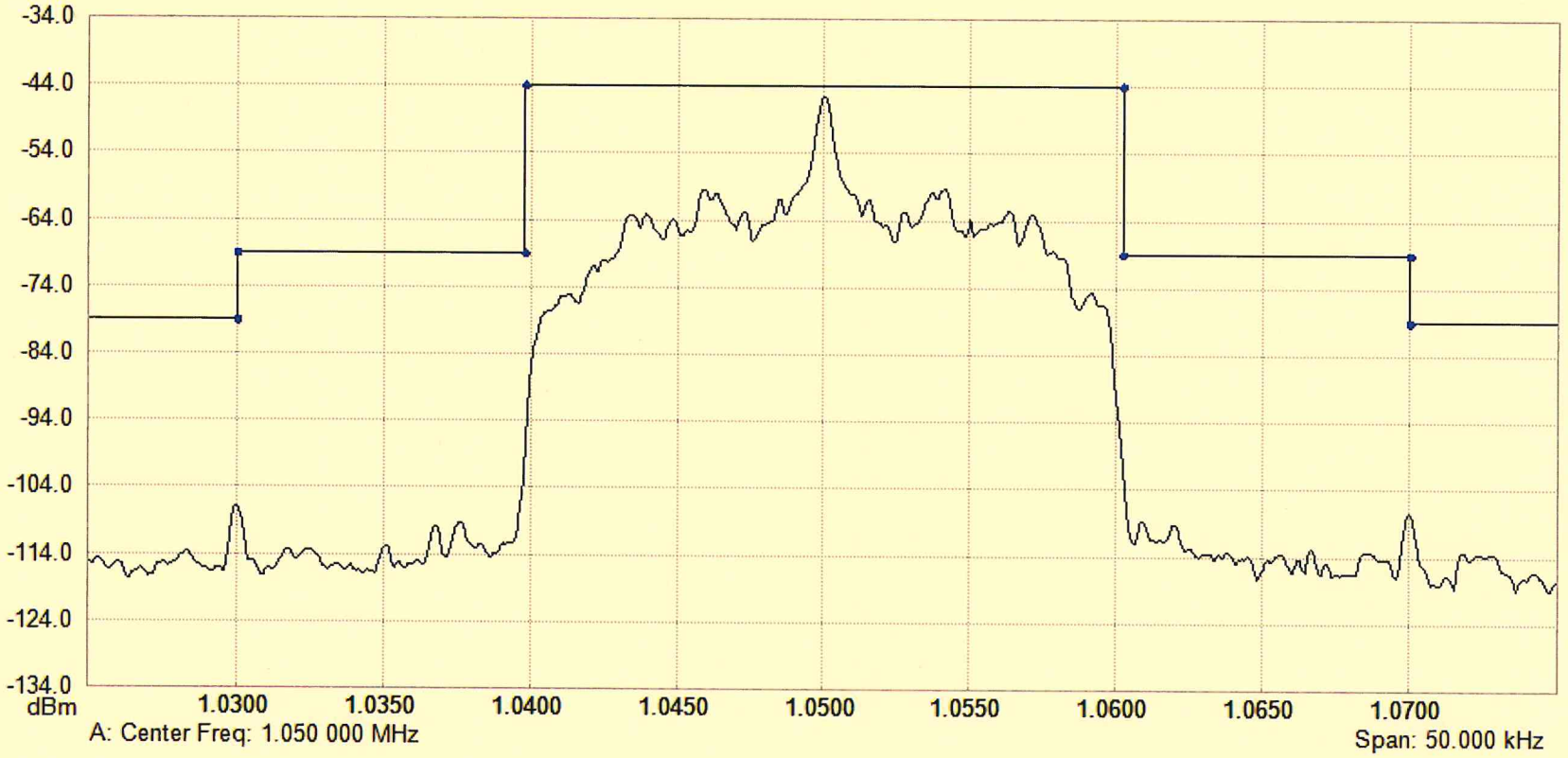
PLEASE NOTE: To fully comply with F.C.C. Rule 73.1590, this NRSC-2 report must be conducted no later than 14 months from the date at the top of this report.


WLIP-AM NRSC Measurement Map
Radio Aids Frequency Measurement Services 574-229-6280
1 Kilometer Limit
WLIP(AM)
NRSC Measurement Location
Bentz
Green Bay Rd
Frontage Rd
Maple Rd
Birch Dr
Sherry Ln
Cedar Ln
Mary Ann Dr
Oak St
Westwood Dr
85th Ave
75 Pl
78th Pl
59th Ave
77th St
County Rd Jct
55th Ave
79th
80th Pl
81st
67th Ave
64th Ave
62nd Ave
61st Ave
82nd Pl
83rd St
83rd Pl
84th St
85th St
66th Ct
65th Ave
63rd Ave
60th Ave
57th Ave
85th Pl
56th Ave
86th
87th
88th St
89th
31
Legend
1 Kilometer Limit
Measurement Site
WLIP-AM Transmitter Location

Spectrum Analyzer Data

WLIP-A-2020 (12/19/2020 3:21:03 PM)

Spectrum Analyzer

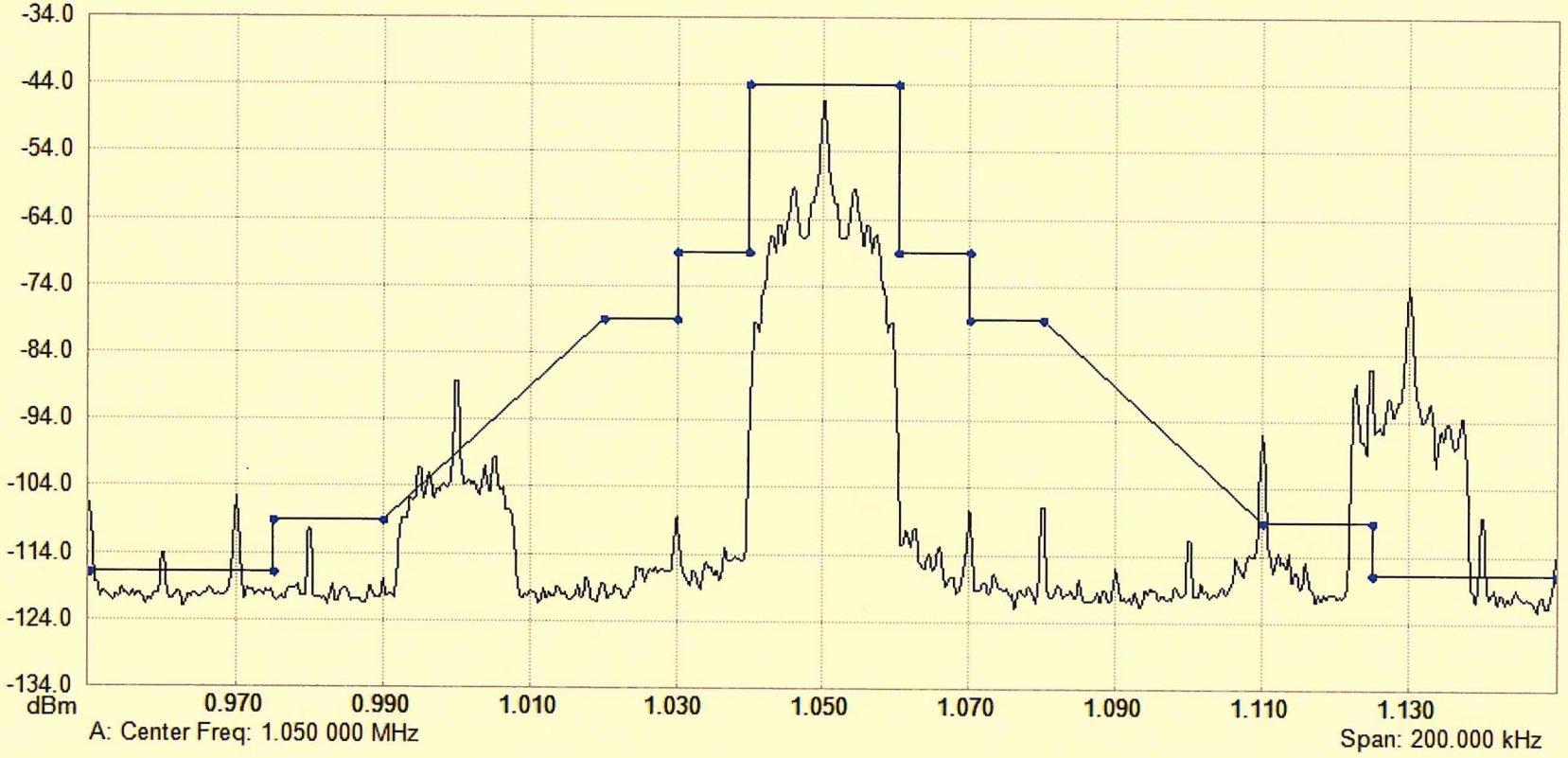


Trace A data:	Stop Frequency = 1.075 000 MHz
Trace Mode = Max Hold	Frequency Span = 50.000 000 kHz
Preamp = OFF	Reference Level = -34.001 dBm
Min Sweep Time = 0.001 S	Scale = 10.0 dB/div
Reference Level Offset = 0 dB	Serial Number = 1122022
Input Attenuation = 0.0 dB	Base Ver. = V4.13
RBW = 300.0 Hz	App Ver. = V5.34
VBW = 100.0 Hz	Model = MS2721B
Detection = Peak	Options = 20
Center Frequency = 1.050 000 MHz	Date = 12/19/2020 3:21:03 PM
Start Frequency = 1.025 000 MHz	Device Name =

Spectrum Analyzer Data

WLIP-B-2020 (12/19/2020 2:51:45 PM)

Spectrum Analyzer



Trace A data:	Stop Frequency = 1.150 000 MHz
Trace Mode = Max Hold	Frequency Span = 200.000 000 kHz
Preamp = OFF	Reference Level = -34.001 dBm
Min Sweep Time = 0.001 S	Scale = 10.0 dB/div
Reference Level Offset = 0 dB	Serial Number = 1122022
Input Attenuation = 0.0 dB	Base Ver. = V4.13
RBW = 300.0 Hz	App Ver. = V5.34
VBW = 100.0 Hz	Model = MS2721B
Detection = Peak	Options = 20
Center Frequency = 1.050 000 MHz	Date = 12/19/2020 2:51:45 PM
Start Frequency = 950.000 000 kHz	Device Name =